

Test Patterns for Measurement of Low-k Dielectric Cracking Thresholds

ABSTRACT OF THE DISCLOSURE

The present invention provides two or more test structures/substructures (100) that are used in a test pattern (500, 600, 700, 800) to determine a cracking threshold for a dielectric material (104) on a substrate. Each test structure/substructure (100) includes two metal structures (102) separated by the dielectric material (104) having a width (G) which is different for each test structure/substructure (100). The cracking threshold will be approximately equal to the largest width (G) of dielectric material (104) that is cracked after processing. The present invention also provides a method for determining the cracking threshold for the dielectric material (104). Two or more test structures (100) are formed on the substrate (402) followed by a determination of whether the dielectric material (104) between the two metal structures (102) for each test structure (100) has cracked during processing (404).